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Memorandum

To: Honorable Bill Haslam, Governor

Honorable Tre Hargett, Secretary of State

Honorable Justin P. Wilson, Comptroller of the Treasury

Honorable David H. Lillard, Jr., Treasurer

Honorable Larry Martin, Commissioner of Finance and Administration

From: William Wood, Budget Analyst, Comptroller of the Treasury

Date: March 26, 2014

Re: Economic Report to Governor

Pursuant to Tennessee Code Annotated §9-4-5202, the State Funding Board (the Board) shall secure estimates of economic growth from the Tennessee econometric model published by the University fo Tennessee's Center for Business and Economic Research (CBER) in its annual Economic Report to the Governor. CBER's report provides an overview of the current estimates of economic growth for the United States and Tennessee. The estimates include data for economic indicators such as nominal personal income, employment, inflation, consumer spending, and the housing market. T.C.A. §9-4-5202 also requires the Board to comment on the "reasonableness" of CBER's estimate of the rate of growth of Tennessee's economy. For the purposes of this report, the rate of growth for Tennessee's economy is based on the percentage increase in estimated Tennessee personal income, pursuant to T.C.A. §9-4-5201. The Comptroller's staff assists the Board in determining the reasonableness of the Economic Report by evaluating current economic conditions and trends by utilizing commonly referenced sources in economic forecasting.

Conclusion: Based on a review of various economic forecasts, trends in the world economy, and historical Tennessee growth, the Economic Report's forecasts for Tennessee nominal personal income growth of 3.33 percent for fiscal year 2014, 4.20 percent for calendar year 2014, and 4.46 percent for calendar year 2015 are not unreasonable.

Staff Commentary

TENNESSEE NOMINAL PERSONAL INCOME

The Economic Report forecasts growth of 4.20 percent for calendar year 2014 and 4.46 percent for calendar year 2015. The forecasted growth for fiscal year 2014 is 3.33 percent.[1] The revised forecast for calendar year 2013 was 2.65 percent. This revised forecast for calendar year 2013 represents a decrease of .89 percent. Exhibit 1 provides a table summarizing the 2014 Economic Report's forecast year estimates.

Exhibit 1: Estimated Tennessee Personal Income Growth

Forecast Year	Report Year 2014
Fiscal Year 2015	4.46%
Fiscal Year 2014	3.33%
Calendar Year 2015	4.46%
Calendar Year 2014	4.20%
Calendar Year 2013	2.65%

Source: Matthew N. Murray, et al., UT Center for Business and Economic Research, *An Economic Report to the Governor of the State of Tennessee: The State's Economic Outlook, January 2014,* Table 2.1: Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted.

COMPARISON OF THE ECONOMIC REPORT TO LEADING ECONOMIC FORECASTING SOURCES

Historically, the rate of growth for Tennessee nominal personal income has closely tracked the growth rate for the gross domestic product (GDP) of the nation. Exhibit 2 shows the relationship between the relative growth for Tennessee personal income in comparison to the relative growth for the United States GDP over the past decade.

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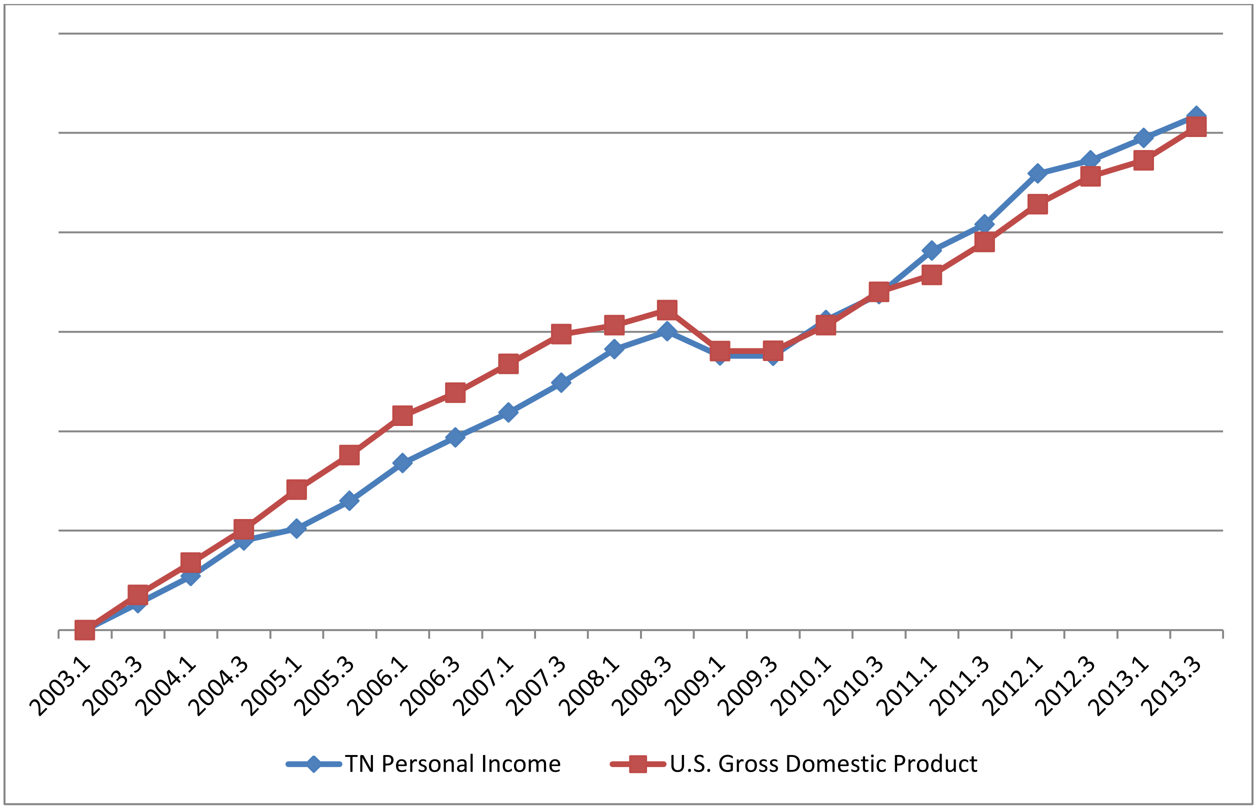
[1] CBER, *Economic Report to the Governor,* 2014, p. xii.

Exhibit 2: Relative Growth of U.S. GDP and Tennessee Personal Income



Source: United States Bureau of Economic Analysis, www.bea.gov (accessed February 3, 2014).

Because the relationship between the indicators presented is closely correlated and few other agencies produce estimates of growth in Tennessee personal income, for the purposes of this commentary, staff will compare the GDP estimates produced by CBER with the GDP estimates produced by other economic forecasting agencies. Given that growth in GDP is expected to be positive, staff expects that growth in Tennessee personal income will be positive as well.

The economy steadily progressed in the first three quarters of 2013, including a growth rate of 4.1 percent in the third quarter due to positive contributions from personal comsuption expenditures, exports, nonresidential fixed investment, private inventory investment, and state and local government spending that were partly offset by negative contributions from federal government spending and residential fixed investment.[2] The economy did decelerate in the fourth quarter however, to a growth rate of 3.2 percent. This reflects a deceleration in private inventory investment, a larger decrease in

[2] Bureau of Economic Analysis, National Income and Product Accounts, Gross Domestic Product, 4th Quarter and Annual, January 30, 2014.

federal government spending, a downturn in residential fixed investment, and decelerations in state and local government spending.[3]

Exhibit 3 includes data from the Economic Report. Selected indicators forecasting economic growth for the United States and Tennessee are summarized below.

Exhibit 3: Economic Report Forecast Summary – by Calendar Year

Indicator	2014	2015
US Real GDP Growth	2.67%	3.25%
TN Real GDP Growth	2.80%	2.89%
US Nominal Personal Income Growth	4.58%	5.02%
TN Nominal Personal Income Growth	**4.20%**	**4.46%**
US Unemployment Rate	6.50%	5.90%
TN Unemployment Rate	7.50%	7.00%
Consumer Price Index	1.44%	1.75%

Source: Matthew N. Murray, et al., UT Center for Business and Economic Research, *An Economic Report to the Governor of the State of Tennessee: The State's Economic Outlook, January 2014,* Table 2.1: Selected U.S. and Tennessee Economic Indicators, Seasonally Adjusted.

REAL GDP

The Economic Report forecasts real GDP growth of 2.67 percent for calendar year 2014 and 3.25 percent for calendar year 2015. Leading economic forecasting sources also expect modest growth levels to continue. Exhibits 4 and 5 compare the Economic Report's forecast with central bank and government forecasts and non-government economists' forecasts.

[3] Ibid.

Exhibit 4: Central Bank and Government Forecasts:

U.S. Real GDP Growth (%) – by Calendar Year

Forecaster	CY 2014	CY 2015	Date
Congressional Budget Office	3.1	3.4	February 2014
Fannie Mae	2.7	2.6	March 2014
Freddie Mac	2.8	3.3	March 2014
World Bank	2.8	2.9	January 2014
International Monetary Fund	2.8	3.0	January 2014
Federal Reserve Bank	2.9	3.1	March 2014
L.A. Econ Development Corp.	2.5	2.9	February 2014
High	3.1	3.4	
Median	2.8	3.0	
Low	2.5	2.6	
CBER	2.7	3.3	January 2014

When compared to the forecasts of the Economic Report, the median forecasts of the central bank and government economists show a slightly higher rate of increase in real GDP for calendar year 2014 and a slightly lower forecast for calendar year 2015. The Economic Report's forecasts for calendar years 2014 and 2015 are within the range of the comparison sources.

Exhibit 5: Non-Government Forecasts:

U.S. Real GDP Growth (%) – by Calendar Year

Forecaster	CY 2014	CY 2015	Date
Citibank	2.6	3.1	March 2014
The Conference Board	2.6	2.7	March 2014
Wells Fargo	2.4	3.1	March 2014
PNC	2.8	2.7	March 2014
Raymond James	2.9	3.1	February 2014
Royal Bank of Canada	2.8	3.2	March 2014
Forbes/Conerly Consulting	3.3	4.1	January 2014
Deutsche Bank	3.3	3.8	February 2014
High	3.3	4.1	
Median	2.7	3.1	
Low	2.4	2.7	
CBER	2.7	3.3	January 2014

In comparison to the Economic Report's forecasts, the median of the non-government outlook shows the same rate of real GDP growth for 2014 and a slightly lower outlook for 2015. Nevertheless, the Economic Report's forecast for real GDP growth for calendar years 2014 and 2015 is within the range provided by comparison forecasts.

FORECAST RISKS

As is the case with any forecast, there is risk due to uncertainty and economic forecasts are no different. Unexpected events or changes in the relationships of underlying explanatory data may decrease a model's ability to provide useful estimates. Some of these risk factors include, but are not limited to:

- The Federal Reserve does not complete the tapering of its long-run asset purchasing program
- Debt ceiling negotiations
- Uncertainty surrounding growth prospects in Europe
- Consumer and business confidence decreases due to the contraction of U.S. exports

Quantitative Easing

In December, the Federal Reserve cited improving conditions of the labor market and the economy in general justifying its announcement of the start of the reduction of asset purchases beginning in January 2014. The response of the markets to the Fed's proposed tapering was mostly positive as this announcement confirmed the strength of the economy and at the same time removed the uncertainty around when the Fed might start tightening its policies.[4] Conversely if the Fed stops tapering it may be a sign of worsening economic conditions which could have an impact on consumer spending and GDP.

Debt Ceiling

The passage of the Bipartisan Budget Act of 2013 brought a much-needed sense of optimism to U.S. consumers and businesses. The risks of another government shutdown are now negligible and a debt ceiling agreement has pushed the issue to 2015 at the earliest. However, this is merely a delay of the issue and not a permanent end and it will be brought up again next year.

European Growth Prospects

In Europe, sovereign-debt issues could re-emerge and austerity responses by the European Union Commission could contribute to push the continent back into recession. This may create downward pressure on U.S. exports and potentially increase the unemployment rate.

[4] CBER, *Economic Report to the Governor,* January 2014, p. 1

U.S. Exports

U.S. exports may be affected by the uncertainty of growth prospects in Europe and emerging markets. This may impact consumer and business confidence which will in turn drive the unemployment rate back up toward 7.5 percent, cause stock prices to plunge, and cause the housing sector to fall back.

CONSUMER SPENDING

GDP is composed of personal consumption expenditures, investment, government purchases and the balance of international trade. Of these, the largest by far is personal consumption. In 2013, it accounted for just over two-thirds of output. The Economic Report forecasts that personal consumption expenditures will grow in 2014 by 2.8 percent, compared to 2.0 percent in 2013. The reasons stated include "steady job growth, surging, stock markets, and rising home prices all continue to boost consumer confidence and household net worth."[5] It also is forecasted that inflation adjusted household net worth will grow by 4.1 percent in 2014 to reach 107 percent of its 2006 level (before housing market crash).[6] The Wall Street Journal's Neil Shah agrees "Now the data suggest that recent stock market gains and a revival in the U.S. housing sector are boosting Americans' wealth. A trend that over time could make them more inclined to borrow and spend, providing a lift for the overall economy."[7]

The minutes of the U.S. Federal Open Market Committee meeting from January 28-29, 2014 note a positive expectation of growth.

Participants generally noted that economic activity had strengthened more in the second half of 2013 than they had expected at the time of the December meeting. In particular, consumer spending had strengthened, and business investment appeared to be on a more solid uptrend.[8] Consumer spending had advanced strongly in late 2013, contributing importantly to the pickup in growth of economic activity. This picture was reinforced by survey data suggesting that consumers had become more optimistic about future income gains. While noting that households remained cautious, participants cited a number of factors that were likely to continue to underpin gains in household spending, including rising house process, growing confidence in the sustainability of the economic expansion, increasing payrolls, and the high ratio of household wealth to disposable income.[9]

The payroll tax hike that took place in January of 2013 does not appear to have significantly damaged retail and food sales. The U.S. Census Bureau reported that advance estimates of U.S. retail and food services sales for January, adjusted for seasonal variation, were $427.8 billion, a decrease of .4

[5] CBER, *Economic Report to the Governor,* January 2014, p. 12.
[6] Ibid.
[7] Wall Street Journal, Neil Shah, *Wealth Lost in Slump Returns,* June 2013.
[8] Minutes of the Federal Open Market Committee, January 28-29, 2014, p. 13.
[9] Ibid.

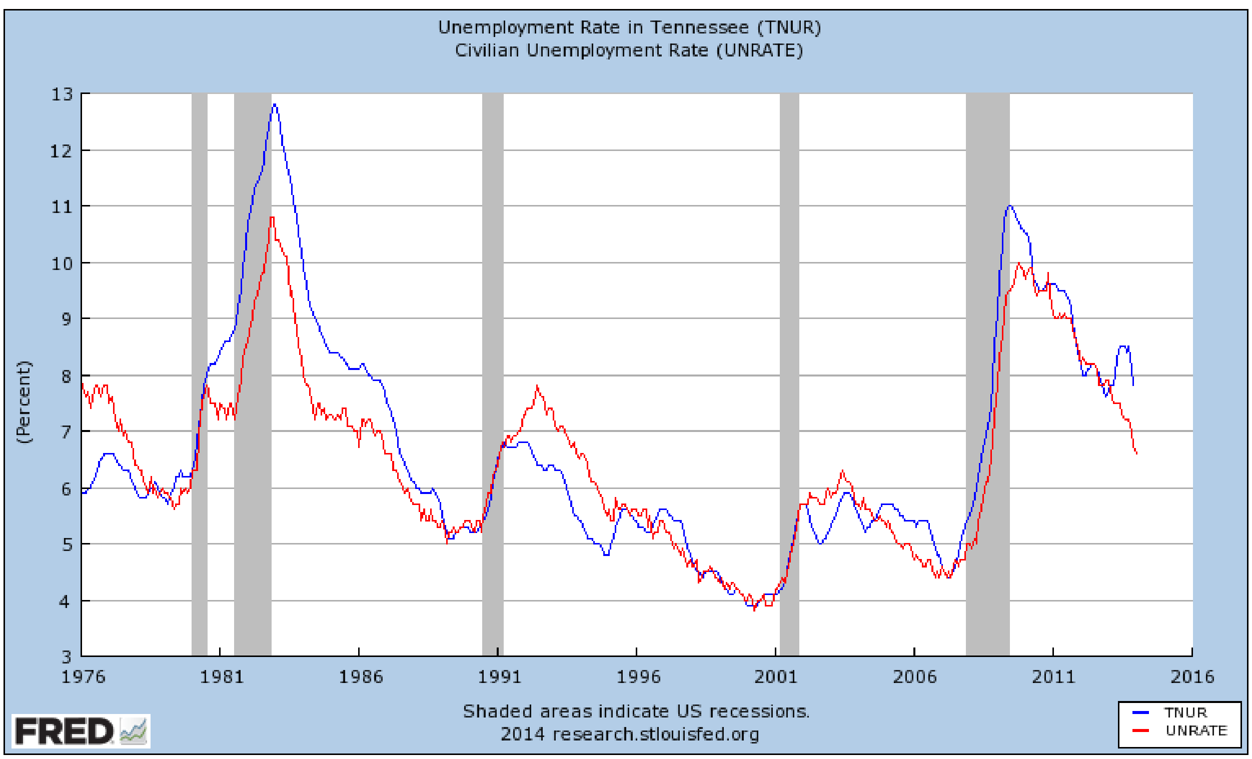
percent from the previous month, but 2.6 percent above January 2013.[10] Retail sales are a key component of consumer spending and effect several economic indicators. Even though this payroll tax increase did not seem to slow retail sales, many economists are wondering at what point does the payroll tax cause havoc with retail sales and the personal consumption component of GDP.

UNEMPLOYMENT

Current Conditions and Forecasts

Since 2009, Tennessee unemployment has been at its highest annual levels since 1982 and 1983, when the annual unemployment rate was 11.7 percent. On average, Tennessee's unemployment rate has been higher than the national rate since the beginning of the recession in December 2007. According to the Tennessee Department of Labor, the unemployment rate for December 2013 was 7.8 percent. The national rate was substantially lower at 6.6 percent in January 2014. For 2014, the Economic Report forecasts a 7.5 percent unemployment rate for Tennessee, compared to a U.S. rate of 6.5 percent. The 2015 forecast for Tennessee shows an unemployment rate of 7.0 percent while the national rate is forecast to be 5.9 percent. Exhibit 6 shows a comparison of national and state unemployment rates from the Federal Reserve Bank of St. Louis.

Exhibit 6: Federal Reserve Bank of St. Louis: Unemployment Rate Comparison



[10] U.S. Census Bureau, U.S. Department of Commerce,"Advance Monthly Sales for Retail and Food Services January 2014", February 2014, www.census.gov/retail/marts/www/marts_current.pdf.

The Economic Report expects seasonally-adjusted nonfarm job growth to be 1.5 percent in 2014 followed by slightly stronger 1.8 percent growth for 2015. For the nation, nonfarm job growth is expected to grow at a similar albeit slightly faster pace. Tennessee's growth will be driven by a relatively strong expansion of leisure and hospitality workforce as well as employment in professional and business services. However, overall growth will be dampened by an expected 5.3 percent contraction in federal government jobs during 2014, followed by an additional 1.0 percent contraction of federal jobs in 2015.[11] In 2013, 2.2 million nonfarm payroll jobs were added for an average of 182 thousand each month.[12]

Kiplinger's forecast is also cautiously optimistic, forecasting "roughly 200,000 jobs a month in 2014 that should push joblessness to near 7.0 percent."[13] It is very likely that the unemployment rate will experience some uptick in the coming year before dropping again due to workers who are not counted in the unemployment numbers reentering the labor force. It is too early to determine what effect, if any, Obamacare will have on job growth. During testimony before the first Joint Deficit Reduction Committee hearing on Capitol Hill, Congressional Budget Office (CBO) Director Douglas Elmendorf told lawmakers that Obamacare creates a "disincentive for people to work".

Labor Force Participation Rate

The unemployment rate can be deceptive because it measures the number of people not holding jobs compared to the total labor force. The labor force does not include unemployed people who are not looking for work. Therefore, the unemployment rate can be over or under estimated depending on the number of individuals who enter or exit the labor force due to their perceptions of succeeding in the search for employment.

INFLATION

There are several ways to measure the level of prices in the economy, but the most popular is the Consumer Price Index (CPI). As measured by the CPI overall prices rose in 2013 by just 1.5 percent, compared to 2.1 percent in 2012 and 3.1 percent in 2011.[14] The Economic Report predicts the CPI will increase 1.44 percent in 2014 and 1.75 percent in 2015. Low energy and commodity prices are the driving factors behind the lower levels of inflation.

The minutes of the Federal Open Market Committee meeting on January 28-29, 2014 share the Economic Report's forecast. The staff's forecast for inflation was little changed from the projection prepared for the previous FOMC meeting, although the near-term forecast was revised down a little to reflect recent declines in energy prices. The staff continued to forecast that inflation would run well below the Committee's 2.0 percent objective early this year but above the low level observed over much of 2013. Over the medium term, with longer-run inflation expectations assumed to remain stable,

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[11] CBER, *Economic Report to the Governor,* 2014, p. 27.
[12] CBER, *Economic Report to the Governor,* 2014, p. 8.
[13] Kiplinger's Economic Outlook for 2014, October 2013, www.kiplinger.com/article/business/T019-C021-S005-kiplinger-gdp-forecast-for-2014.html.
[14] CBER, *Economic Report to the Governor,* 2014, p. 8.

changes in commodity and import prices expected to be muted and slack in labor and product markets receding gradually, inflation was projected to move back slowly toward the Committee's objective.[15]

TRADE

The net effect of trade (imports minus exports) has a negative or positive effect on GDP. In 2013, the U.S. recorded a trade deficit of $502 billion or 3.0 percent of GDP in nominal terms. The United States typically has a trade deficit. It is important to note that exports have grown faster than imports for the third consecutive year. Exports grew by 2.5 percent in 2013, compared to 1.5 percent for imports. This has caused the trade deficit to shrink significantly.[16]

According to economists polled by Reuters, trade added 1.33 percentage points to GDP growth as exports expanded at their quickest pace in three years and imports slowed.[17] As stated previously, this creates a positive effect on our GDP. There are doubts however, that the robust export growth pace can be sustained in light of slowing growth in markets like China. December's fall in exports could bolster this view.[18] Additionally, strengthening domestic consumer demand could draw in more imports.

HOUSING MARKET

For the third consecutive year, both construction and manufacturing sectors recorded net payroll employment growth, adding 164,000 and 60,000 jobs. The rebound of the housing sector, which started in 2012, was sustained in 2013. Household spending on new housing grew by 14.6 percent. That is the second consecutive year of double-digit growth. The number of housing starts increased by 19.0 percent to reach 931,000 units in 2013, compared to 783,000 in 2012. Home prices also kept their upward trend dating back to 2012. Despite its solid performance, the housing sector still has a long way to go to recover fully. Sales of new houses are still less than one-half their pre-crisis level.[19]

Kiplinger's is also optimistic on housing. They forecast more expansion ahead for the housing market in 2014, with starts and new home sales continuing to rise at double-digit rates, thanks to tight inventory.[20] The worse than expected winter months of 2013-2014 might cause the growth rate to moderate. Fannie Mae also sees single family home sales increasing at double-digit rates. Their housing forecast predicts growth of 20.2 percent in 2014 and an increase of 30.0 percent in 2015.[21] According to data from the Tennessee Housing Development Agency, Tennessee home sales increased 23.06 percent from 2011 to 2012.

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[15] Minutes of the Federal Open Market Committee Meeting, January 28-29, 2014, p. 12.
[16] CBER, *Economic Report to the Governor,* 2014, *p. 7.*
[17] Reuters, "U.S. Trade Deficit Widens in December as Exports Fall" February 2014.
[18] Ibid.
[19] CBER, *Economic Report to the Governor,* 2014, *p. xi.*
[20] Kiplinger's Economic Outlook, February 2014, www.kiplinger.com/tool/business/T019-S000-kiplinger-s-economic-outlooks/#housing.
[21] FannieMae, Economic and Strategic Research, Housing Forecast: January 2014.

MANUFACTURING

According to the Economic Report manufacturing has recorded its third consecutive year of net payroll employment growth and Tennessee will continue to grow at a slow rate of 1.0 percent in 2014 and .5 percent in 2015.[22] While employment in this sector has begun to bounce back since the Great Recession, employment levels are still far below pre-recession levels and there is no expectation of reaching pre-recession levels in the foreseeable future.[23]

J.P. Morgan's Global Manufacturing Purchasing Managers Index (PMI) decreased slightly to 52.9 from December 2013's two and a half year high of 53.0. This slight decrease is almost certainly due to the severe adverse weather suffered by parts of the United States. David Hensley, Director of Global Economics Coordination at J.P. Morgan, said: "The global manufacturing sector maintained its solid growth momentum at the start of the year, with production and new orders expanding at rates above their respective averages for the current recovery. Manufacturers are also still adding to payrolls, a positive bellwether that they expect the current upturn to run further. Slower inflation of raw material prices will also aid on the cost and profits fronts."[24]

AGRICULTURE

The Economic Report's national forecast for 2013 net farm income is $131 billion, $17 billion above the 2012 estimate of $117.9 billion. This increase is the result of higher income from livestock. Crops suffered from weaker prices and cattle producers saw gains from higher value of production.[25] The United States Department of Agriculture however, has a bearish view of agriculture net farm income going forward. "Net farm income is forecast to be $95.8 billion in 2014, down 26.6 percent from 2013's forecast of $130.5 billion. The 2014 forecast would be the lowest since 2010, but would remain $8 billion above the previous 10-year average. Lower crop cash receipts, and, to a lesser degree, a change in the value of crop inventories and reduced government farm payments, drive the expected drop in net farm income."[26]

CONCLUSION

Based on this review, the Economic Report's forecast of 3.33 percent nominal personal income growth for fiscal year 2014, 4.20 percent for calendar year 2014, and 4.46 percent for calendar year 2015, does not appear unreasonable.

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[22] CBER, *Economic Report to the Governor, 2014,* p. 30.
[23] CBER, *Economic Report to the Governor, 2014,* p. 30.
[24] J.P. Morgan Global Manufacturing PMI, February 2014.
[25] CBER, *Economic Report to the Governor,* 2014, p. 34.
[26] United States Department of Agriculture, Economic Research Service, Highlights From the 2014 Farm Income Forecast.